What is claimed is:

1. An anisotropic exchange spring magnet powder comprising:

a hard magnetic material phase containing a rare earth metal element, a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O);

a soft magnetic material phase containing a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), and wherein

said hard magnetic material phase and soft magnetic material phase have crystal particle diameters of 150 nm or less.

2. The anisotropic exchange spring magnet powder according to Claim 1, wherein the content of said rare earth metal element is from 2 to 15 atomic %, and the content of at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O) is from 1 to 25 atomic %.

3. The anisotropic exchange spring magnet powder according to Claim 1, wherein said rare earth metal element is at least one element selected from the group consisting of neodymium (Nd), praseodymium (Pr) and samarium (Sm).

4. The anisotropic exchange spring magnet powder according to Claim 1, wherein said transition metal element is composed mainly of iron (Fe) or (Co).

5. A method of producing an anisotropic exchange spring magnet powder comprising steps of:

preparing a crystalline mother material containing a hard magnetic material phase containing a rare earth metal element, a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), and a soft magnetic material phase containing a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), and/or, the crystalline mother material partially having amorphous parts;

amorphousating said crystalline mother material, and re-crystallizing said amorphousated mother material.

6. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein treatment is conducted by repeating a continuous process composed of said amorphousating process and crystallizing process, once or more times.

7. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein said crystalline mother material having amorphous parts has a content of amorphous parts obtained by temperature property of magnetization of 95% or less.

8. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein in said crystallizing process, anisotropy is imparted to the crystalline mother material amorphousated in said amorphousating process and the material is molded while solidifying.

9. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein said amorphousating process is conducted under a condition in which oxygen is blocked, in any of vacuum, an inert gas, nitrogen and an organic solvent.

10. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein said crystallizing process is conducted under a condition in which oxygen is blocked, in any of vacuum, an inert gas, nitrogen and an organic solvent.

11. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein said crystallizing process has a crystallization heating treatment temperature of 950°C or less.

12. The method of producing an anisotropic exchange spring magnet powder according to Claim 5 wherein said crystallizing process has a crystallization heating treatment time of 1 hour or less.

13. An anisotropic exchange spring magnet obtained by treatment, in an anisotropy-imparting molding process and a solidification process, of an anisotropic exchange spring magnet powder comprising a hard magnetic material phase containing a rare earth metal element, a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), and a soft magnetic material phase containing a transition metal element, and at least one element selected from the group consisting of boron (B), carbon (C), nitrogen (N) and oxygen (O), wherein said hard magnetic material phase and soft magnetic material phase have crystal particle diameters of 150 nm or less.